China gets first SiGe BiCMOS foundry

Jazz Semiconductor and Advanced Semiconductor Manufacturing Corporation (ASMC) are to collaborate and create China's first pure-play foundry service for SiGe BiCMOS process technology. Under the partnership, Jazz Semiconductor, a foundry spin-off from Conexant in Newport Beach, California , will contribute its BiCMOS and SiGe process technologies as well as engineering assistance. Jazz will also provide the marketing and sales effort for the Chinese manufacturing venture. ASMC will provide capacity for SiGe processes in its new 200mm wafer fab in Shanghai. The fabrication facility is expected to begin volume production in the fourth quarter of 2003, producing 30,000wpm.

Theodore Zhu, VP of sales, strategy and business development for Jazz Semiconductor said "The agreement provides Jazz customers access to RF and mixed-signal process technologies in China where the wireless market is expected to grow significantly, and provides a second source alternative."

The two companies said China's Ministry of Information Industry (MII) has estimated that more than 200m mobile phone subscribers exist in the country, making it the second largest market for mobile communications in the world. The ministry has estimated that 100m wireless handset were sold in China during 2002.

Uppsala University takes DCA MBE

DCA Instruments has received an order from the Ångström laboratory of Uppsala University, Sweden for a unique UHV deposition system. The MTD 450D features an MBE module combined with an UHV sputtering module and will be used for the growth and preparation of devices made of magnetic layers of rare earth metals.

South Epitaxy and LanBao MOCVD

South Epitaxy Corporation has announced the successful installation and start-up of an Emcore E300 GaNzilla MOCVD reactor at its material production facility in Tainan, Taiwan. An epiwafer manufacturer, South Epitaxy provides materials including GaN for end applications such as traffic signals, outdoor displays, and electronics backlighting.

According to Charles Cheng, CEO of South Epitaxy "The incorporation of the tool into the facility went extremely well, and ramp-up to production moved quickly. The performance and cost effectiveness of the tool are much better than on other machines we have worked with; we are currently producing green GaN 525nm chips exceeding 200mcd with the system."

LanBao Photoelectric Materials Co has ordered two Emcore E300 GaNzilla MOCVD tools. With as much as twice the throughput of competing tools, the GaNzilla platform will significantly increase the Shanghai company's ability to produce high quality blue and green GaN-based LED epiwafers.

Based in China, Shanghai LanBao is a supplier of epimaterial and an optoelectronics manufacturer; it has continued to increase production capacity since its inception in 2000.

Working from the Institute of Physics, Chinese Academy of Sciences (CAS) in Beijing, a technical partner with Shanghai LanBao, Prof. Jun Ming Zhou and Prof. Hong Chen have developed technology for GaN-based materials for UHB blue and green LEDs.

Prof. Chen said, "By utilising this high volume MOCVD production platform, LanBao is expected to be a leader in opto-electronic materials . . . expediting the development of third generation semiconductor technology in China."

Air Products' White Ammonia

Air Products is producing and shipping White Ammonia, a new ultra-high purity ammonia that is the first commercially available product to achieve lower than 1ppb moisture without needing the additional step of downstream purification.

The end result is better performing LEDs, with manufacturers stepping closer to achieving quality white light, considered to be the future replacement of incandescent lighting.

White Ammonia is produced exclusively at Air Products' electronic speciality gas manufacturing plant in Hometown, Pennsylvania. Purity is tested on-site in a trace metals laboratory.

"Our goal is to strengthen our position as the leading supplier of electronic specialty gases to the high brightness LED market - this new material certainly helps us do that," said Michael Hilton, Air Products' VP for Electronic Gases, Equipment and Services.

Aixtron expands IP for AVD

Aixtron has acquired a patent and license portfolio for its TriJet technology from JIP Elec (France). TriJet enables the highly reproducible delivery and evaporation of liquid precursors during atomic vapor deposition (AVD) of oxide-based materials and is an integral part of Aixtron's Tricent and AVD technology, claiming all the advantages of MOCVD processes with the control of atomic layer thickness for highly integrated devices.

Aixtron had exclusive licenses from JIP Elec and a 7.4% stake in the company. Now Aixtron has divested its shareholding back to JIP Elec, acquired the IP portfolio related to TriJet and granted patent licenses for niche applications back to JIP Elec. The French company also assigned to Aixtron a government research insitute CNRS owned license in return for a sub-license for niche use. This followed Qualiflow's acquisition of JIP Elec. Aixtron's outsourcing strategy continues with Qualiflow continuing to produce the TriJet as the exclusive supplier for the sub-system assembly.